

VISVESVARAYA TECHNOLOGICAL UNIVERSITY BELGAUM



A Project Report on

“VIRTUAL KEYBOARD WITH WIRELESS PS2 KEYBOARD PC
INTERFACE”
(SPONSORED BY KSCST BANGALORE)

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ABSTRACT

VIRTUAL KEYBOARD

With fast growing technology all devices are becoming compact but our hands are still same and many times we feel uncomfortable and we feel there should be some system to help us to enter text, type long mails etc on our PDA, Pocket PC, and Mobiles etc. For this problem we have come up with a solution of virtual keyboard technology in which you don't have carry conventionally bulky keyboard but a simple printed paper and sometimes that is also not required, is enough to setup a portable virtual keyboard, with lasers/Ambient light we will illuminate the area, using CMOS image sensor we will capture status of your fingers on the keyboard, The CMOS camera continuously captures images of the region where the printed keyboard is supposed to be placed, one way of processing data is to check these images for red color data above a specified threshold. The threshold concept works in this case because the laser shining on a typical human finger generates saturating values of red color data, which is very easily distinguishable from its surroundings and there is AVR or similar process that does all processing and finally gives output which key was pressed. And second option is to be implemented when ambient light is used for illumination of keyboard and time a special finger detection algorithm is required to process the real time data and conclude which key is pressed.